

WHAT IS CLAIMED IS:

1. A semiconductor device manufacturing method, comprising:  
providing a semiconductor wafer provided with a plurality of metal portions on a  
5 surface of the semiconductor wafer;  
suspending the semiconductor wafer in a reflow furnace;  
reflowing the metal portions on the surface of the semiconductor wafer suspended  
in the reflow furnace so that the metal portions form conductive terminals using a first  
heater disposed in the reflow furnace and facing the surface of the semiconductor wafer.

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2. The semiconductor device manufacturing method of claim 1, wherein the  
semiconductor wafer is suspended by a plurality of pins.

3. The semiconductor device manufacturing method of claim 2, wherein the  
15 pins are mounted on a stage that is heated by a heating plate disposed under the stage

4. The semiconductor device manufacturing method of claim 1, wherein the  
semiconductor wafer is heated by a second heater disposed so as to face a lateral edge of  
the semiconductor wafer.

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5. A semiconductor device manufacturing method, comprising:  
providing a semiconductor wafer provided with a pair of first wirings on a front  
surface of the semiconductor wafer;

25 attaching a first supporting substrate to the front surface of the semiconductor  
wafer;

attaching a second supporting substrate to a back surface of the semiconductor  
wafer;

partially exposing the first wirings by forming a groove through the  
semiconductor wafer;

30 forming second wirings connected to exposed portions of the first wirings and  
extending to a surface of the second supporting substrate;

forming a plurality of metal portions on the second wirings;  
supporting the semiconductor wafer using a plurality of pins that are in contact  
with the first supporting substrate; and  
reflowing the metal portions so as to form conductive terminals using a first  
5 heater disposed to face the back surface of the semiconductor wafer while the  
semiconductor wafer is supported by the pins.

6. The semiconductor device manufacturing method of claim 5, wherein the  
pins are mounted on a stage that is heated by heating plates disposed underneath the  
10 stage.

7. The semiconductor device manufacturing method of claim 5, wherein the  
semiconductor wafer is heated by a second heater disposed so as to face a lateral edge of  
the semiconductor wafer.

8. A semiconductor device manufacturing method, comprising:  
preparing a semiconductor wafer provided with a pair of first wirings on a front  
surface of the semiconductor wafer;  
attaching a supporting substrate to the front surface of the semiconductor wafer;  
20 partially exposing the first wirings by forming a groove from a back surface of the  
semiconductor wafer;  
forming second wirings connected to exposed portions of the first wirings and  
extending to the back surface of the semiconductor wafer;  
forming a plurality of metal portions on the second wirings,  
25 supporting the semiconductor wafer using a plurality of pins that are in contact  
with the supporting substrate; and  
reflowing the metal portions so as to form conductive terminals using a first  
heater disposed to face the back surface of the semiconductor wafer while the  
semiconductor wafer is supported by the pins.

9. The semiconductor device manufacturing method of claim 8, wherein the

pins are mounted on a stage that is heated by heating plates disposed underneath the stage.

10. The semiconductor device manufacturing method of claim 8, wherein the  
5 semiconductor wafer is heated by a second heater disposed so as to face a lateral edge of the semiconductor wafer.